

In the Claims

Applicant submits a new complete claim set showing amended claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

1-19. (Canceled)

20. (Original) A liquid handling device comprising:
a body having at least one bore formed in the body;
a plunger slidably engaged with the body within the bore;
a pipette tip holder that fluidly communicates with the bore; and
a linear servo motor that drives the plunger to slide within the bore, sliding of the plunger causing fluid to move between the pipette tip holder and the bore.

21. (Original) The device of claim 20, further comprising:
a linear encoder that provides position information for the plunger.

22. (Original) A gel extruder for extruding gel material suitable for gel electrophoresis processing, comprising:
an extruder body including an extrusion cavity having a first end and a second end; and
a liquid material supply apparatus that supplies a liquid material to the first end of the extruder body;
wherein the liquid material cools within the extrusion cavity to form a gel that exits from the second end of the extrusion cavity.

23. (Original) The extruder of claim 22, wherein the extrusion cavity is arranged so that the first end is lower than the second end.

24. (Original) The extruder of claim 22, wherein the extruder body includes a pair of spaced plates that define two sides of the extrusion cavity.

25. (Original) The extruder of claim 24, wherein at least one of the plates is cooled by a chilled liquid.

26. (Original) The extruder of claim 22, wherein the liquid material supply device includes a pump that delivers the liquid material under pressure to the first end of the extrusion cavity.
27. (Original) The extruder of claim 26, wherein the pressure of the liquid material entering the first end of the extrusion cavity forces the gel to exit from the second end of the extrusion cavity.
28. (Original) The extruder of claim 22, further comprising a cutting device that cuts gels extruded from the second end of the extrusion cavity.
29. (Original) The extruder of claim 22, further comprising a rotatable platform that receives a gel exiting from the second end of the extrusion cavity and rotates to place a gel in a receiving area.
30. (Original) The extruder of claim 29, further comprising a vacuum pump that evacuates air from the platform and creates a suction force to secure gels to the platform.
31. (Original) A method for forming gels suitable for use in a gel electrophoresis process, comprising:
 providing a liquid material at a first end of an extrusion cavity;
 forming a gel in the extrusion cavity using the liquid material; and
 extruding the gel from a second end of the extrusion cavity.
32. (Original) The method of claim 31, wherein the step of forming a gel comprises cooling the liquid material to form a gel.
33. (Original) The method of claim 31, wherein the step of providing a liquid material comprises providing the liquid material at a first end of the extrusion cavity that is lower than the second end of the extrusion cavity.

34. (Original) The method of claim 31, further comprising:
using the extruded gel in an electrophoresis process.

35-48. (Canceled)

36. (New) The device of claim 20, wherein the at least one bore has a cylindrical shape.

37. (New) The device of claim 20, wherein the plunger has a cylindrical shape.

38. (New) The device of claim 20, further comprising an adapter connected to the body that removably connects to a robotic device .

39. (New) The device of claim 20, wherein an air tight seal is formed between the plunger and a corresponding bore, and the plunger is arranged to move axially within the corresponding bore.

40. (New) The device of claim 20, further comprising:
a plurality of bores formed in the body;
a plurality of plungers, each plunger slidably engaged with a corresponding one of the plurality of bores in the body; and
a plurality of pipette tip holders, each pipette tip holder fluidly communicating with a corresponding bore.

41. (New) The device of claim 40, further comprising a bar that is coupled to the plurality of plungers and is coupled to the linear servo motor, wherein the linear servo motor drives the bar to move in a linear direction, thereby causing the plungers to move in a linear direction within the corresponding bores.

42. (New) The device of claim 41, further comprising a plurality of pipette tips each attached to a corresponding one of the plurality of pipette tip holders, each of the pipette tips arranged to withdraw and expel a controlled volume of fluid based on movement of a plunger in a corresponding bore.

43. (New) The device of claim 42, wherein the plurality of pipette tips are arranged to align with wells in a microtiter plate.

44. (New) An apparatus for forming gels suitable for use in a gel electrophoresis process, comprising:

means for providing a liquid material at a first end of an extrusion cavity;

means for forming a gel suitable for gel electrophoresis processing in the extrusion cavity using the liquid material; and

means for extruding the gel from a second end of the extrusion cavity.